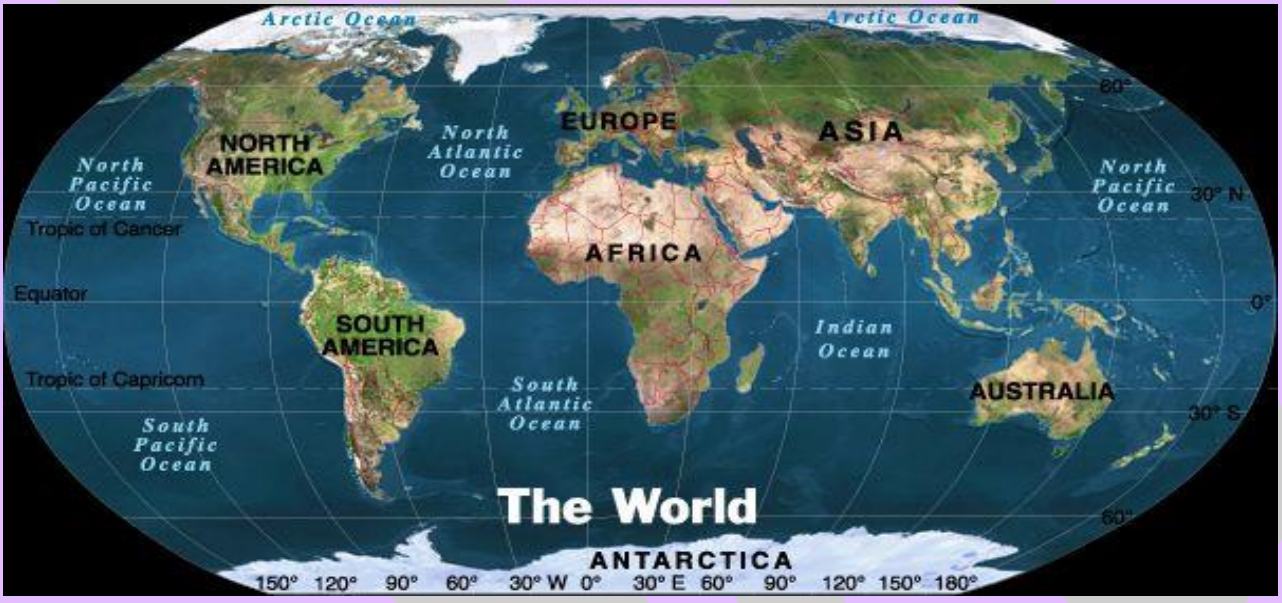
MGT. 205A



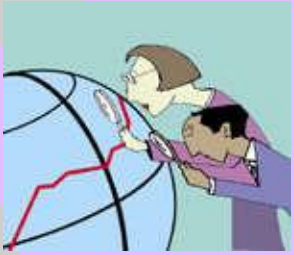
Daniel J.B. Mitchell

Ho-su Wu Professor

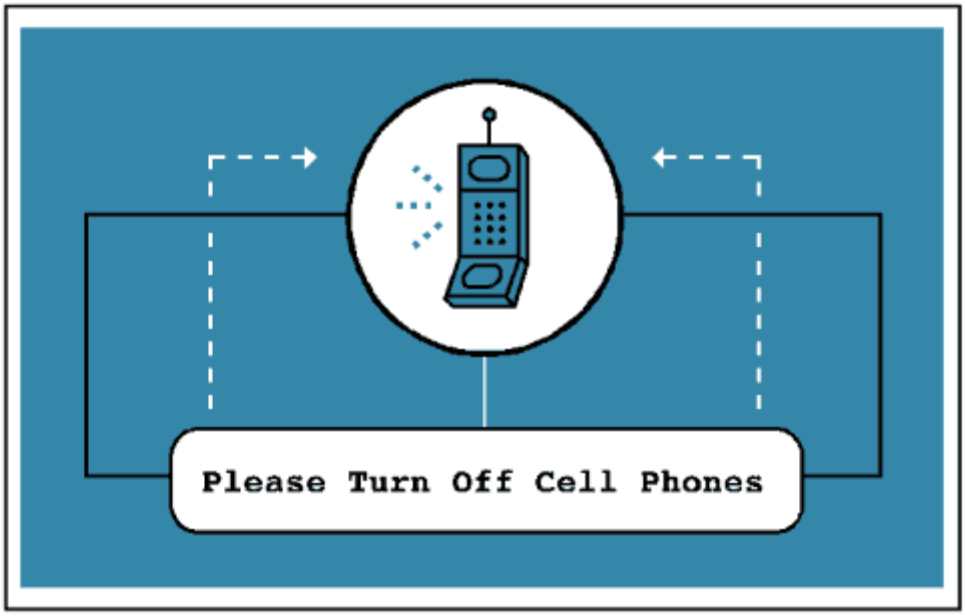
Anderson School

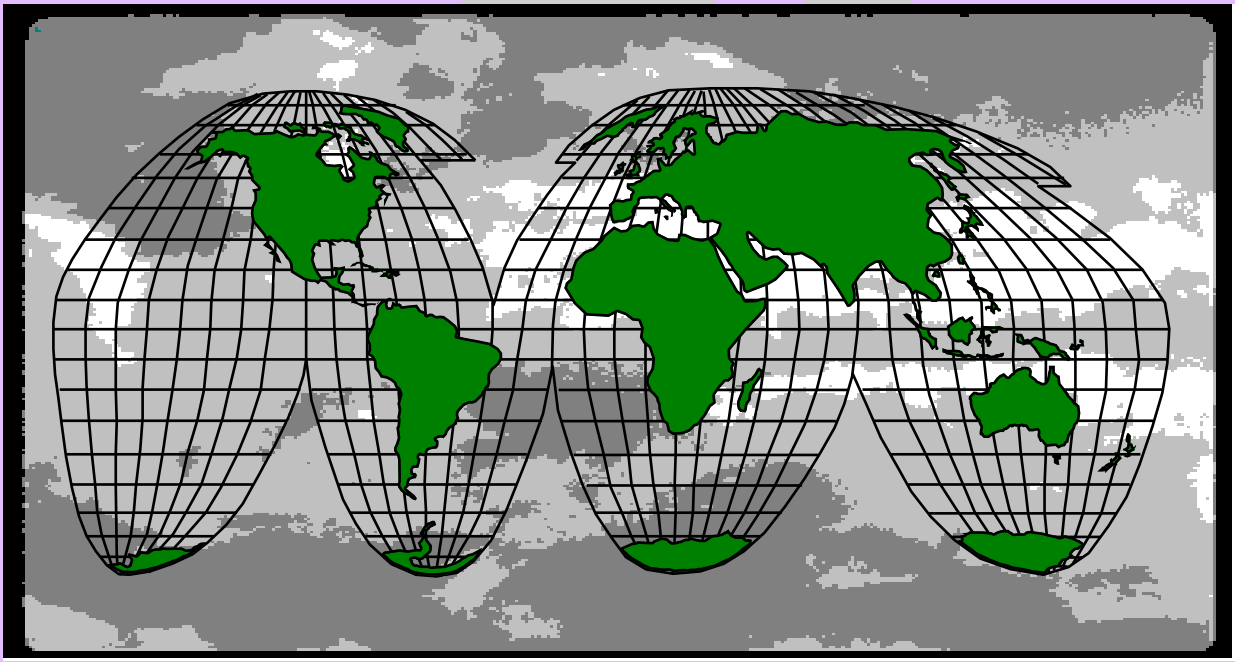
and

School of Public Affairs



Reminder





Happy Birthday

Bertil Ohlin

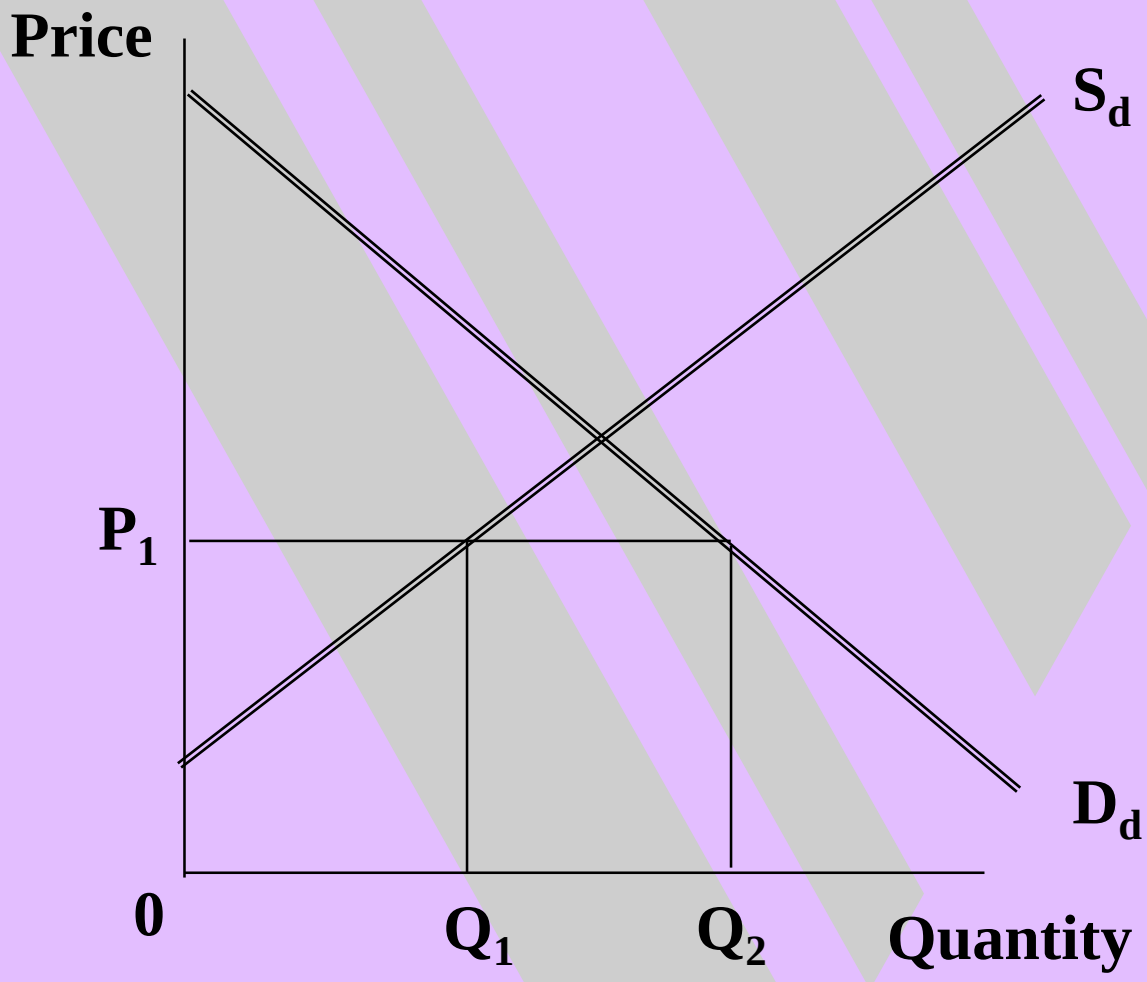
April 23, 1899

Levels to Investigate

Pro-Tariff Arguments

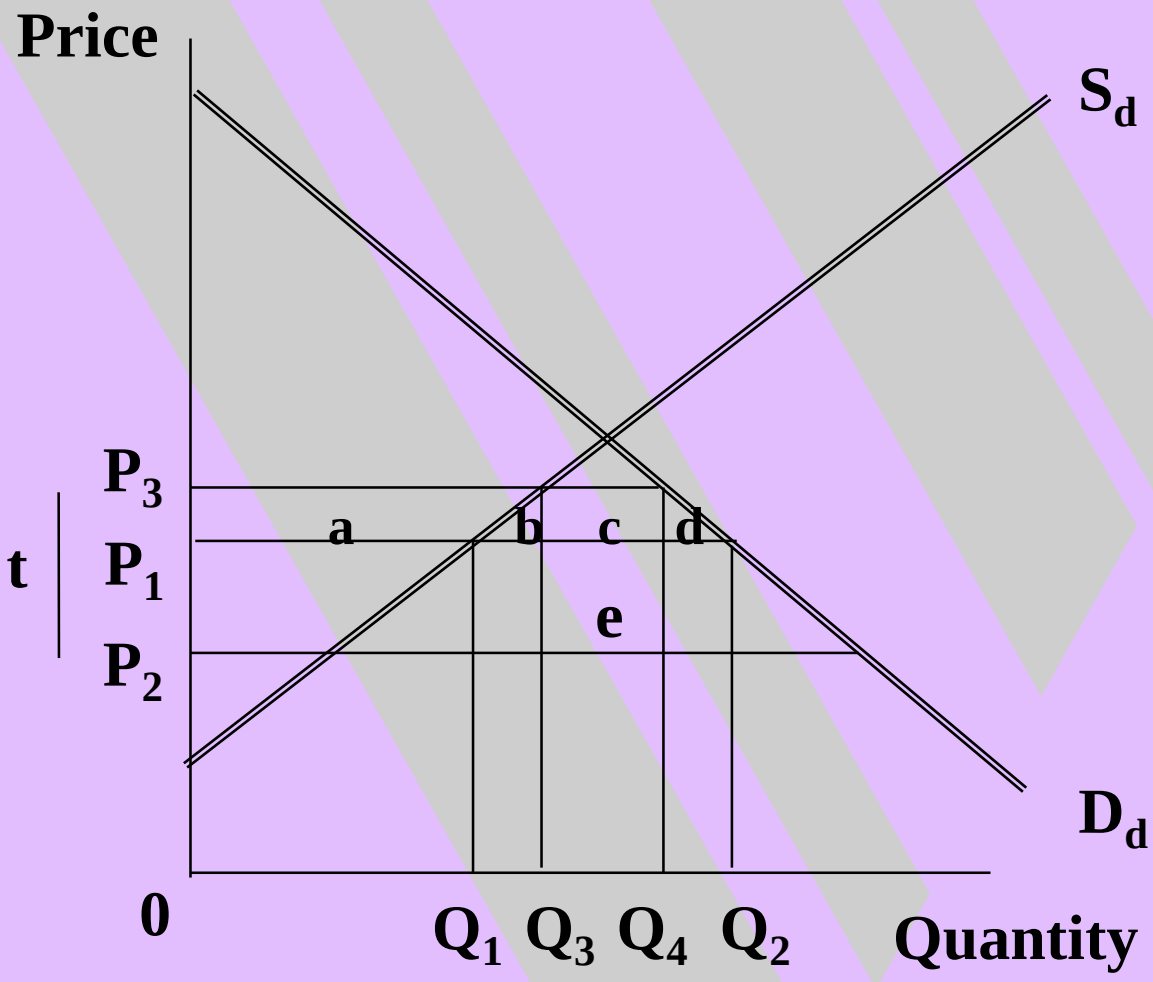
- Terms of trade effect
- National defense
- Infant industry
- Save jobs
- Protect culture or “way of life”
- Prevent “dumping”
- Threat to open up export markets
- ??

Terms of Trade Effect



Question: What if imposing a tariff affected the world price P_1? What effect might occur?

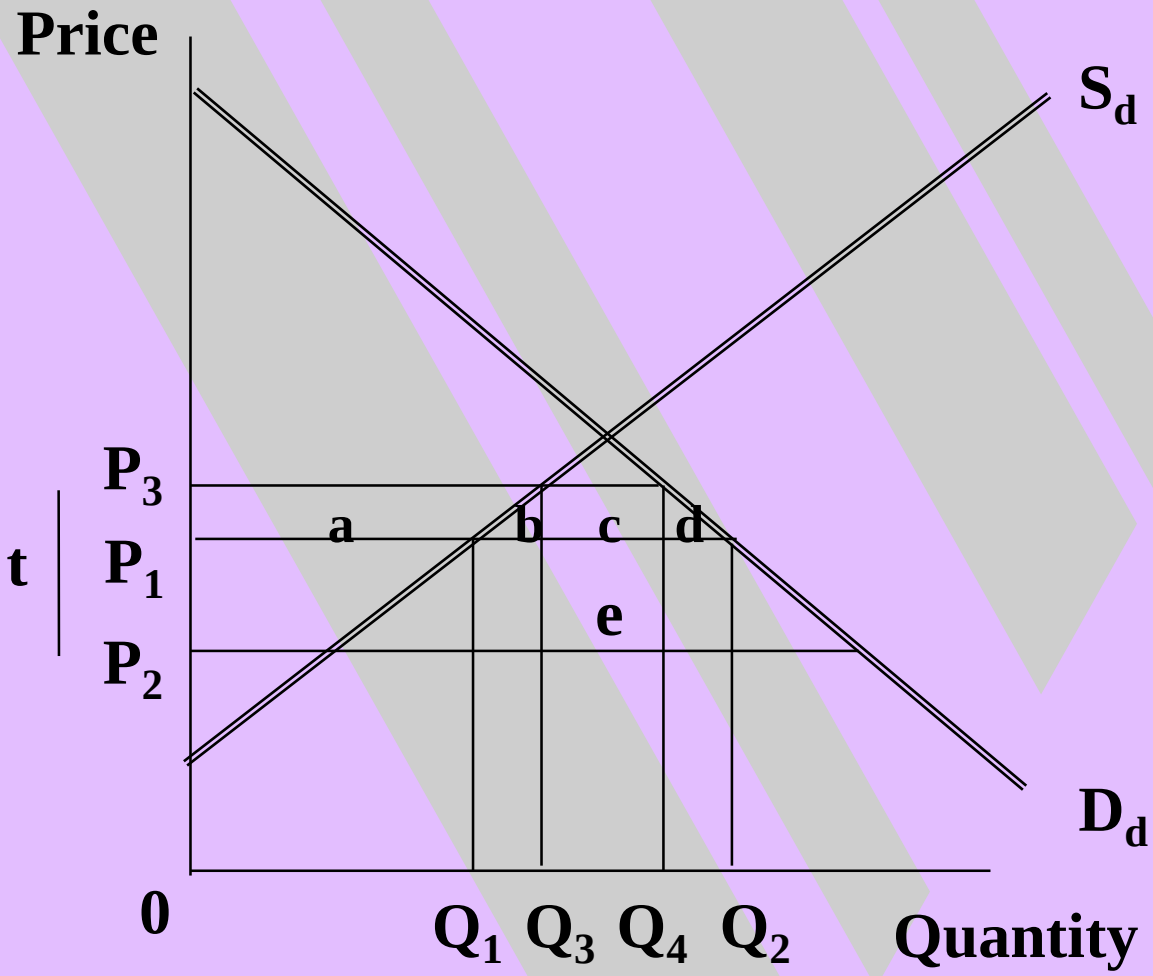
Terms of Trade Effect



<u>Question</u>: What is the "net" impact on the three actors?

Terms of Trade Effect

Net gain or loss?



Consumers –a-b-c-d

Producers +a

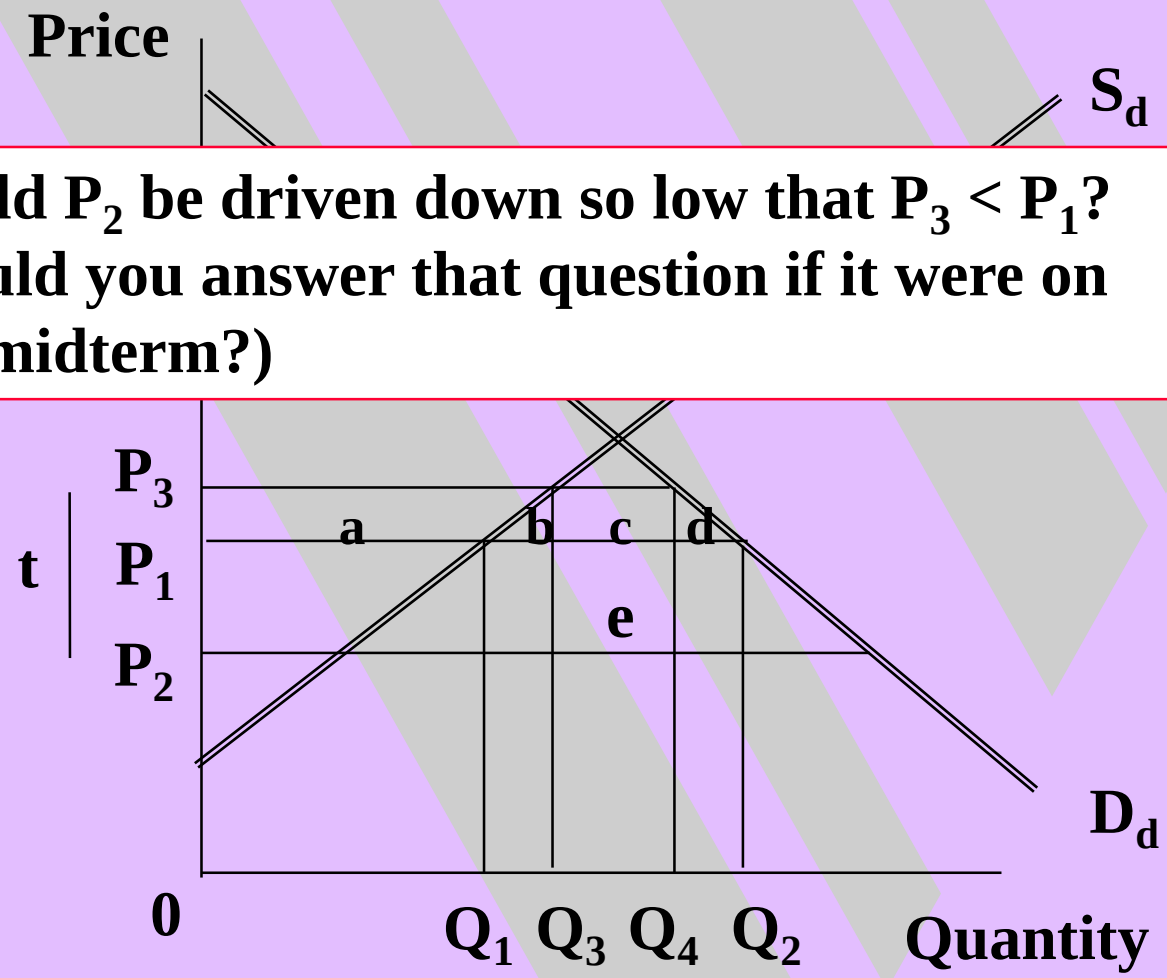
Government +c +e

Net -b -d+e

Terms of Trade Effect

Net gain or loss?

Could P_2 be driven down so low that $P_3 < P_1$? (Could you answer that question if it were on the midterm?)



Consumers -a-b-c-d

Producers +a

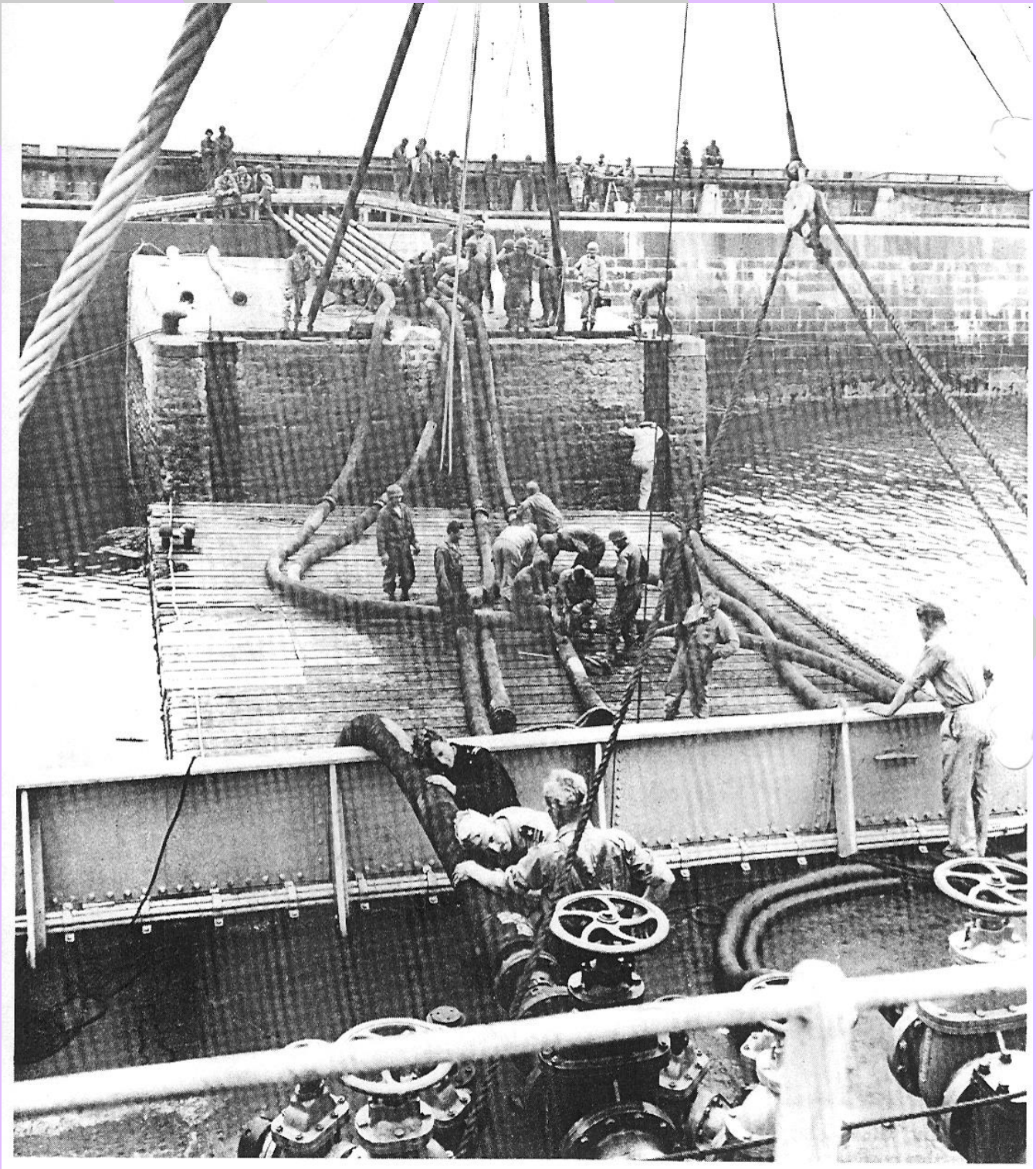
Government +c +e

Net -b -d+e

National Defense

"An army marches on its stomach."

Napoleon

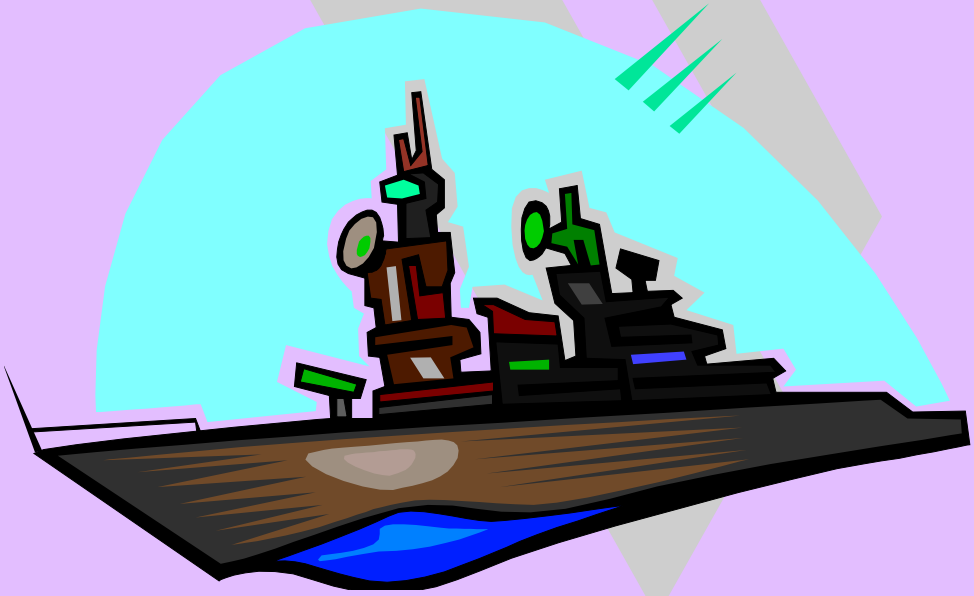


THE FIRST SHIP-TO-SHORE GASOLINE LINE, put in operation at Cherbourg. During the assault phase the Allied forces relied on canned gasoline, but by 3 July bulk supply was being introduced by ship-to-shore pipeline which brought in part of the large quantities of gasoline necessary to the Allied forces.

OPENING THE VALVE ON A GASOLINE PIPELINE. The critical fuel situation of September, which had stalled the armored divisions at the West Wall, was materially improved by December. At that time three main pipelines were constructed or under construction: one for the northern armies, one for the central armies, and another for the southern armies.

National Defense

- Strategic products
- Social vs. Private Benefits
- Alternatives

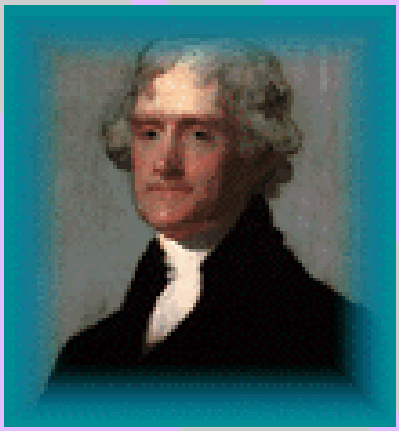


National Defense

- Strategic products
- Social vs. Private Benefits
- Alternatives

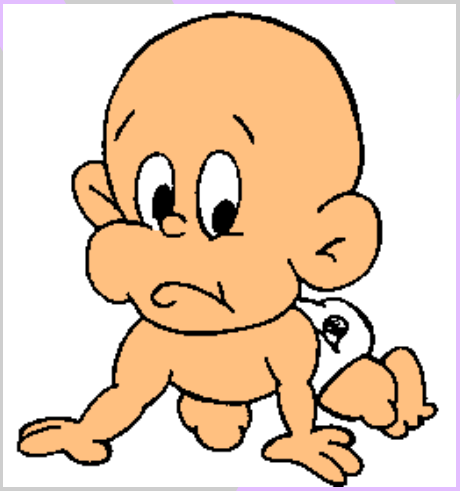
Infant Industry

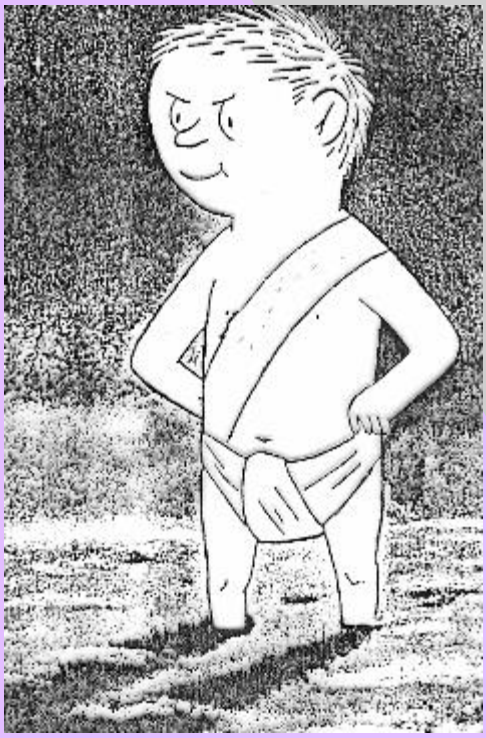
Alexander Hamilton
1755-1804

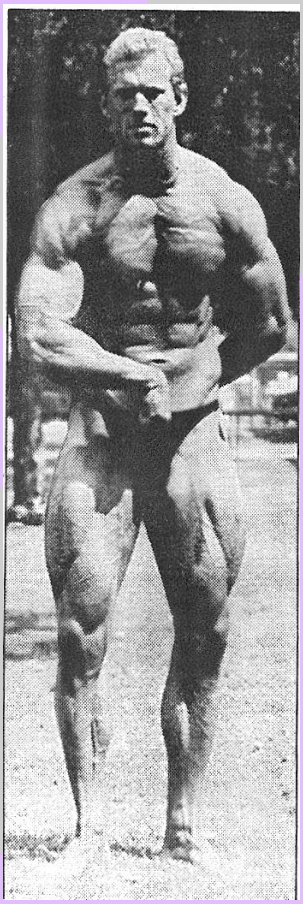


Thomas Jefferson
1743-1826

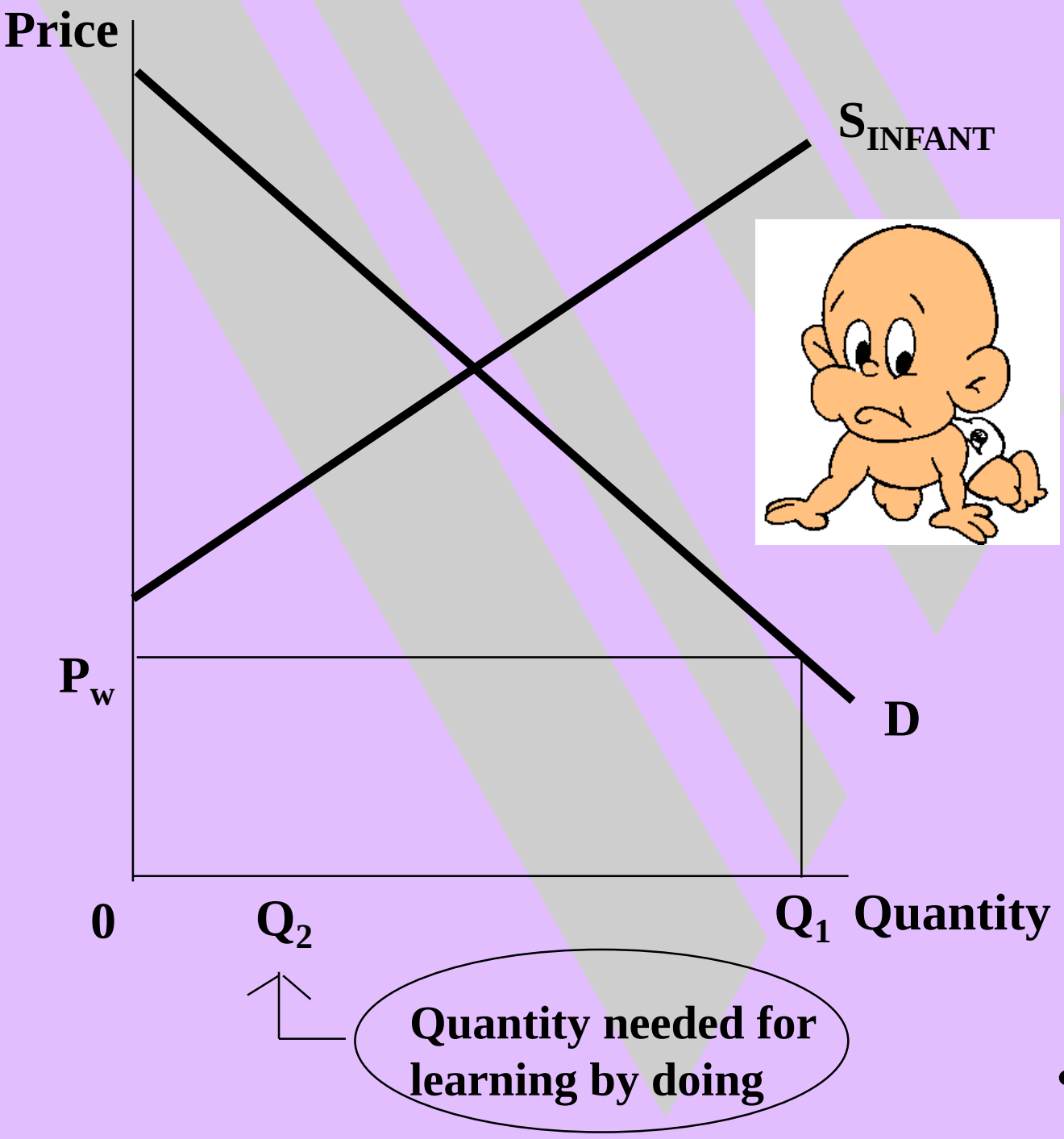
Friedrich List
1789-1846





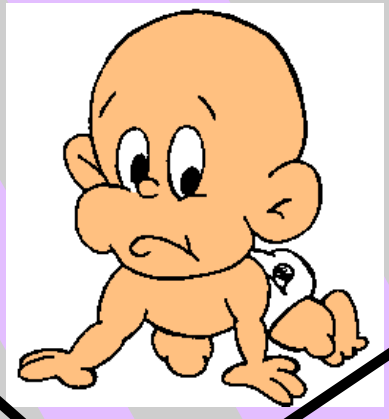


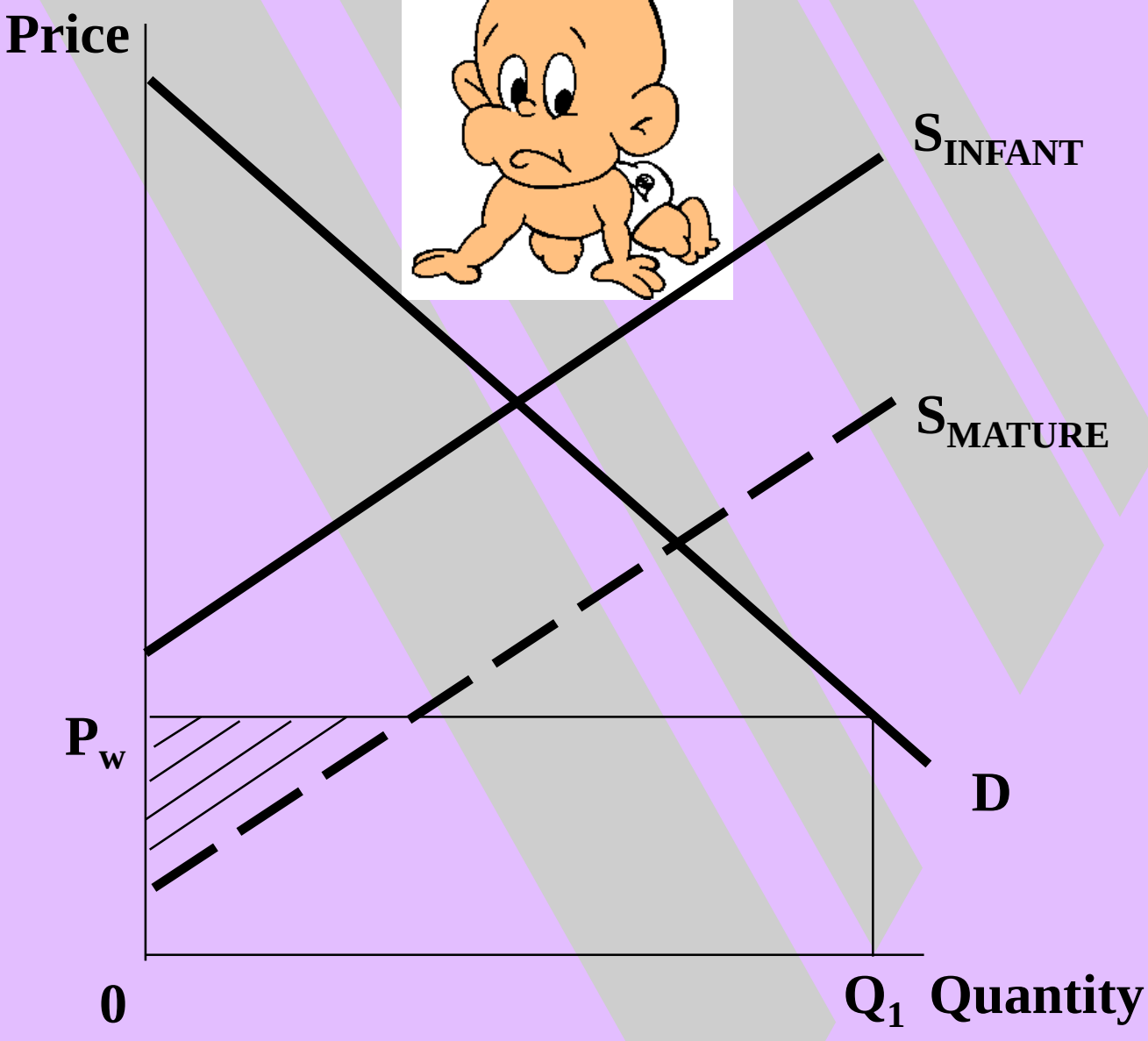
Infant Industry



Infant Industry:

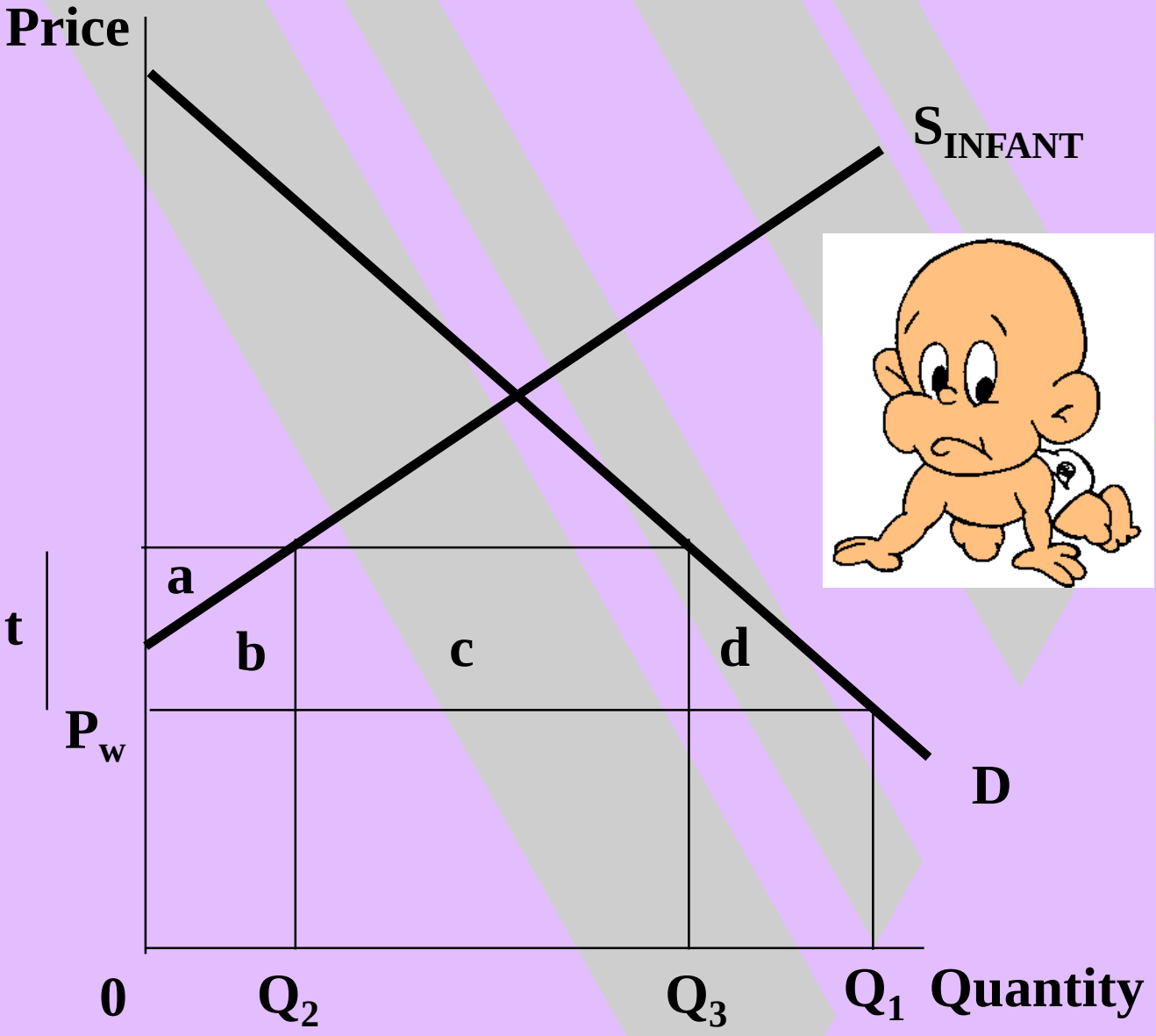
Eventual Effect





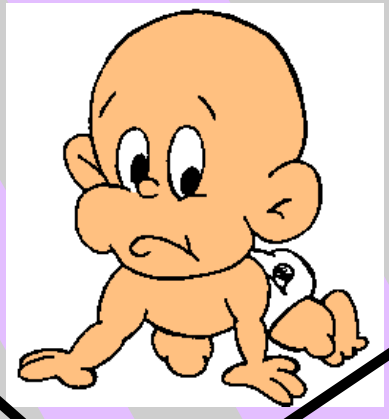
Infant Industry:

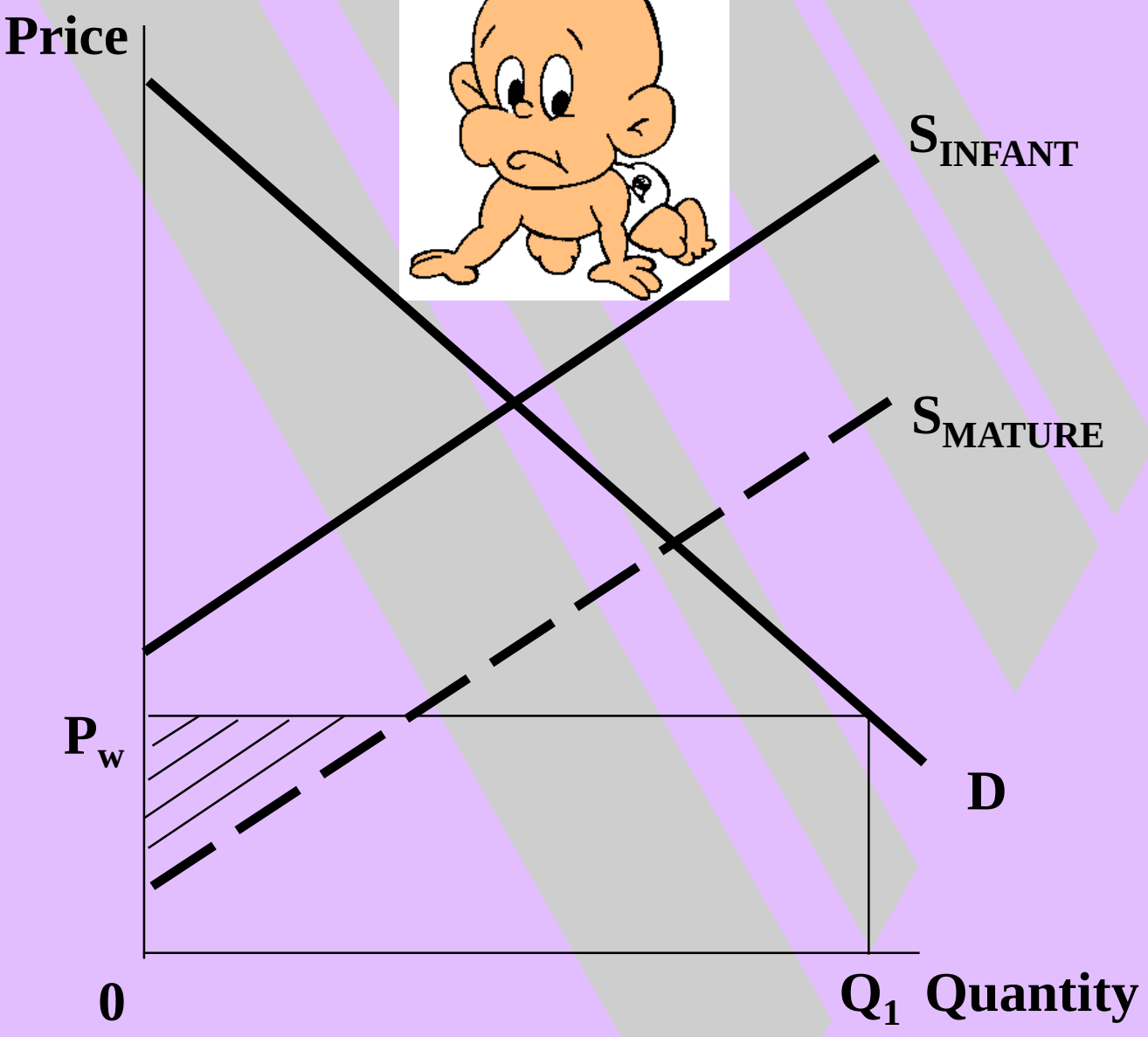
Initial Impact



Infant Industry:

Eventual Effect

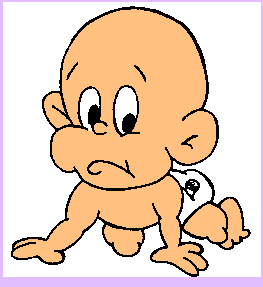




Does the shaded area outweigh initial b+d costs?

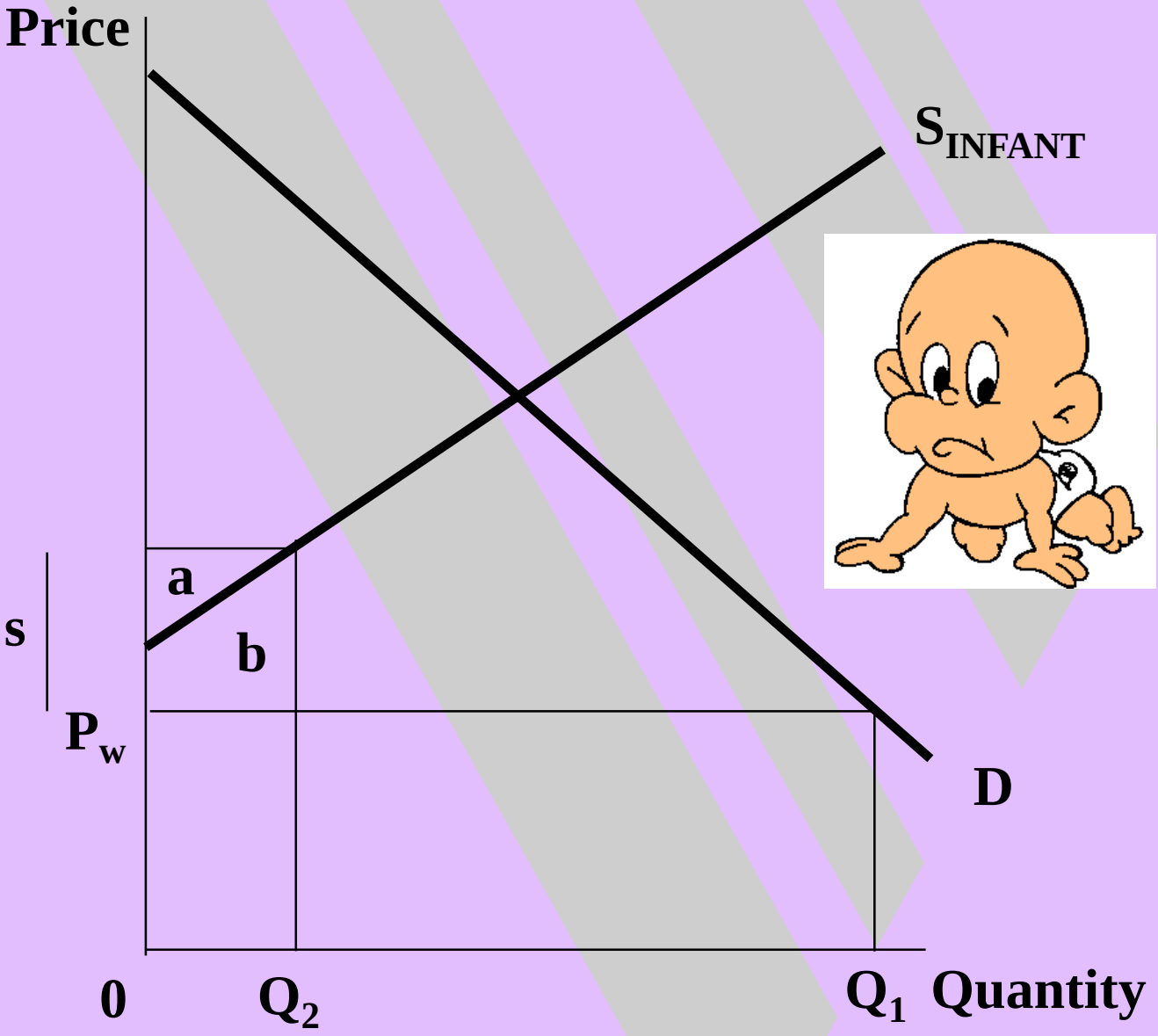
Summary of Infant Industry Argument

- **Infant is brought into being by tariff**
- **Infant matures via learning through doing**
- **It "pays" to have net cost today in order to achieve maturity gain in future (including present discounted value calculation)**
- **Question: Could we improve the net gain?**



Infant Industry:

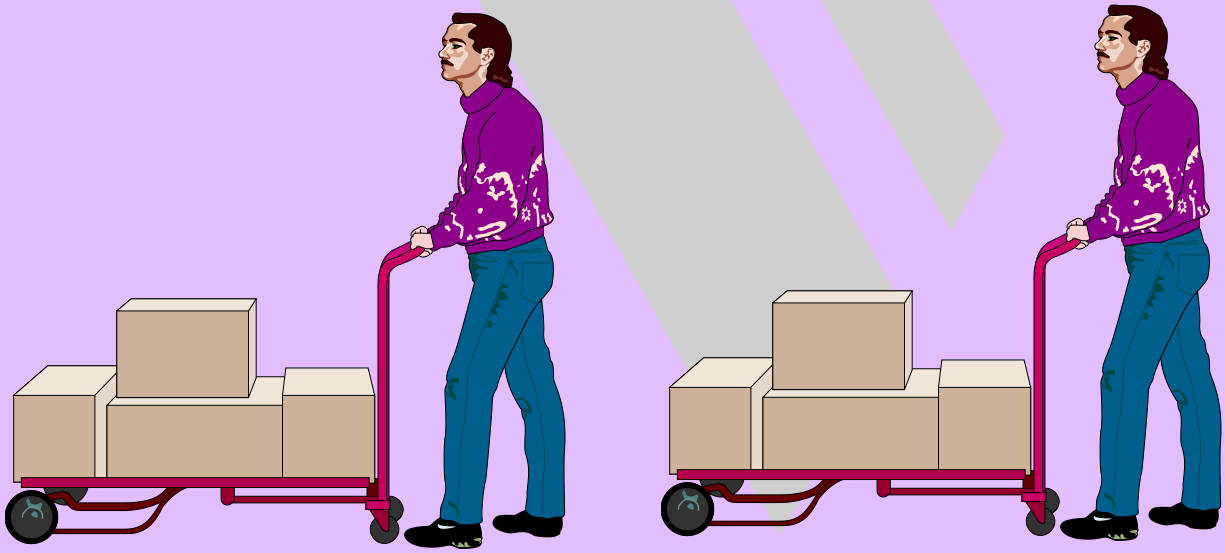
Subsidy Alternative

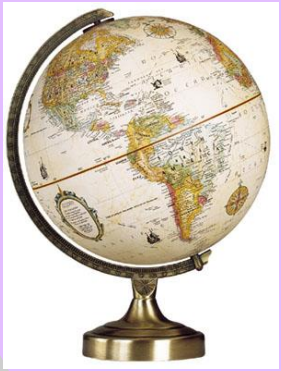


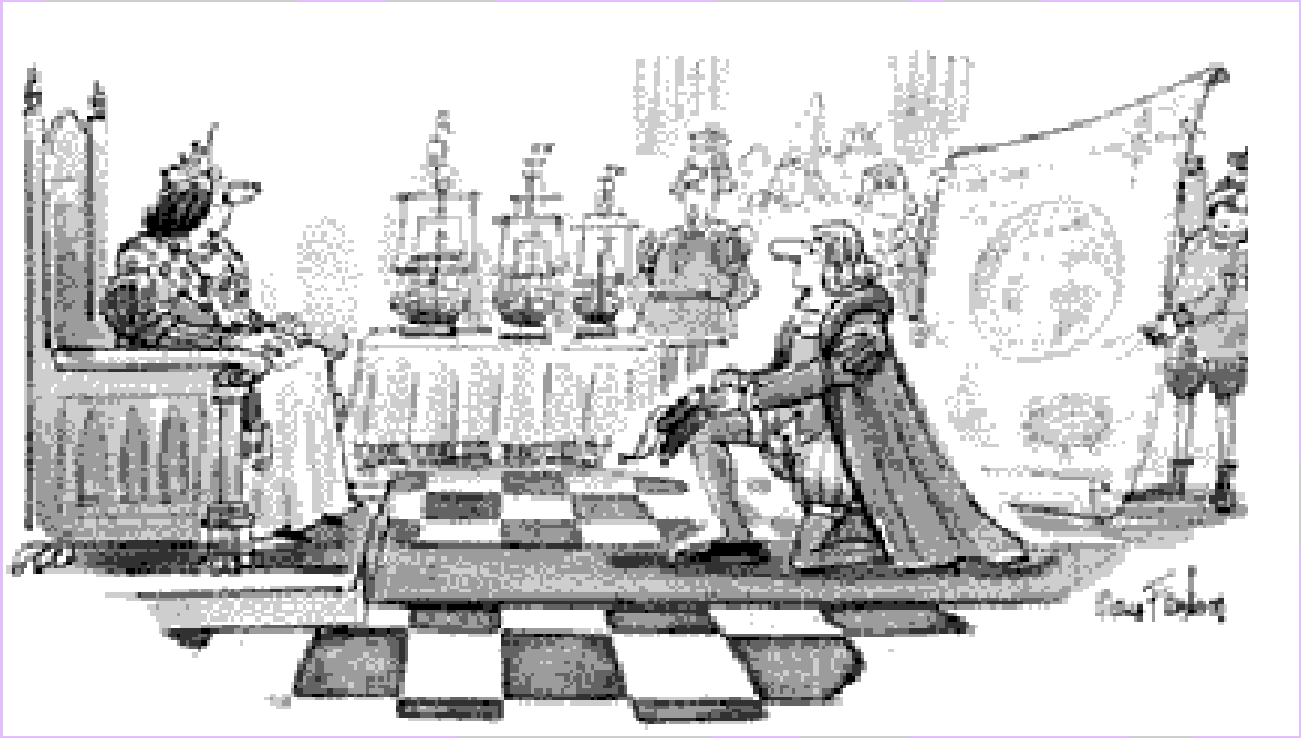
<u>Question</u>: Why can't private sector fund this "project"?

A Tariff to Save (or Create) Jobs

- **At the industry level?**
- **At the economy-wide level?**
- **Note: Macro unit to come later in course.**







"Your Majesty, my voyage will not only forge a new route to the spices of the East but also create over three thousand new jobs."

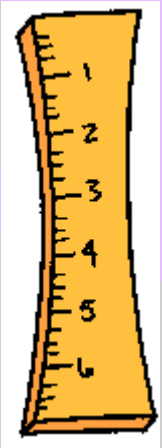
Protect National Culture?

DRAWINGBOARD / RAESIDE LA Times 2/17/97 B5

RAESIDE 96
Victoria Times Colonist
KEEP GARBAGE OUT OF CANADA!
PROTECT OUR CANADIAN CULTURE
KEEP OUR CULTURE CANADIAN
SAVE THE CBC
SAVE OUR CANADIAN IDENTITY!
UH... CAN WE WRAP THIS UP SOON?... BAYWATCH STARTS IN 15 MINUTES.

Tariff Measurement Issues

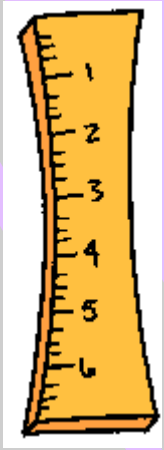
- "Average" tariffs



  - -Rates and weights
  - -A simple approach
  - -An interpretation problem

- "Effective" vs. nominal tariffs

Calculating an Average Tariff



Method 1:

- **-Convert all tariffs to ad valorem equivalents**
- **-Weight each rate by some appropriate measure. (What weights would you choose?)**
- **-Sum the weighted rates**

Method 2:

- **-Divide total tariff revenue by total value of imports**

Method 2 (quick and dirty)

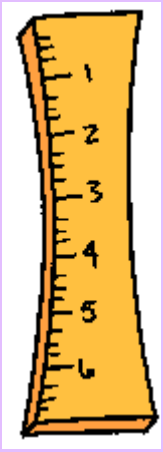
t_i = ad valorem tariff rate on product i

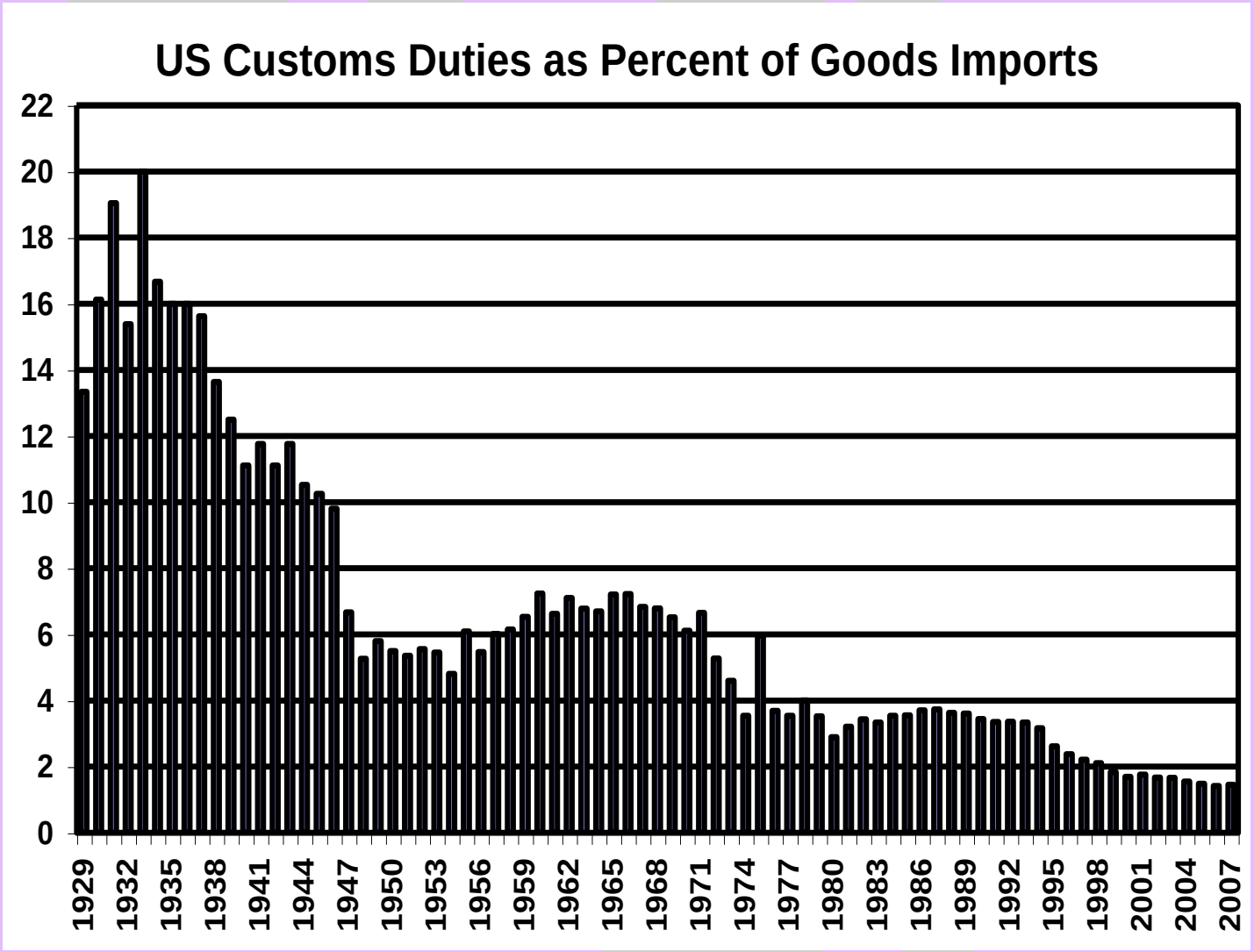
v_i = value of imports of product i

Tariff Revenue/Import Value =

$$\Sigma t_i v_i / \Sigma v_i =$$

$$\Sigma t_i (v_i / \Sigma v_i) \quad .$$





Source: National Income Accounts

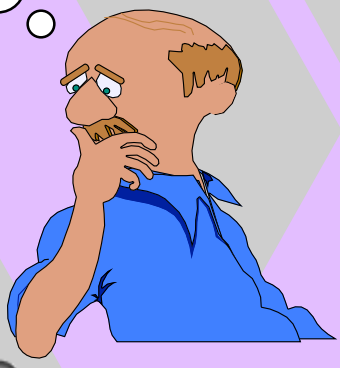
Problems?

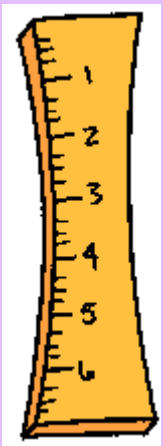
Compression

Changes in Product Mix

Effective Protection:
Strung Pearls Example

What are we protecting?





Which would you rather have?

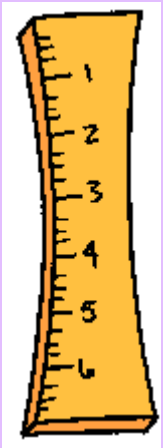
A genuine string of pearls

A string of genuine pearls

Wording Matters!

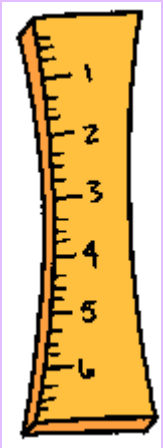
Effective Protection:
Example 1

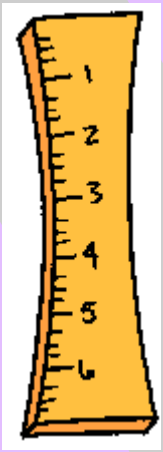
	U.S.	Foreign
Pearls (at world price)	$99.00	$99.00
Labor for stringing	$1.00	$0.50
Total cost in U.S.	$100.00	$99.50



Effective Protection: *Example 2*

	U.S.	Foreign
Pearls (at world price)	$99.00	$99.00
Labor for stringing	$1.00	$0.50
Tariff on strung pearls	--	$0.50
Total cost in U.S.	$100.00	$100.00





Effective Protection: *Example 2*

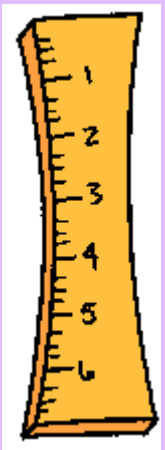
	U.S.	Foreign
Pearls (at world price)	$99.00	$99.00
Labor for stringing	$1.00	$0.50
Tariff on strung pearls	--	$0.50
Total cost in U.S.	$100.00	$100.00

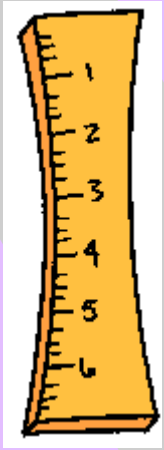
Nominal tariff = .50/99.50 (about 0.5% on strung pearls)

Effective tariff = .50/.50 (a rate of 100% on pearl stringing)

Effective Protection:
Example 3

	U.S.	Foreign
Pearls (at world price)	$99.00	$99.00
Tariff on pearls	$0.25	--
Labor for stringing	$1.00	$0.50
Tariff on strung pearls	--	$0.50
Total cost in U.S.	$100.25	$100.00





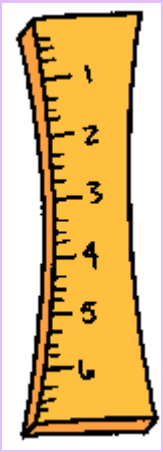
Effective Protection:
Example 3

	U.S.	Foreign
Pearls (at world price)	$99.00	$99.00
Tariff on pearls	$0.25	--
Labor for stringing	$1.00	$0.50
Tariff on strung pearls	--	$0.50
Total cost in U.S.	$100.25	$100.00

Nominal tariff on input = .25/99.00 (about 0.25%)

Nominal tariff on final product = .50/99.50 (about 0.5% on strung pearls)

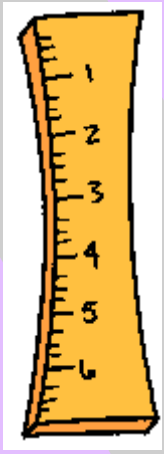
Effective protection on pearl stringing?



Effective tariff on pearl stringing:

$$\frac{(.50 - .25)}{.50}$$

= 50%



Effective Tariff

$$= \frac{t - qr}{1-r}$$

t = ad valorem tariff on output

q = ad valorem tariff on input

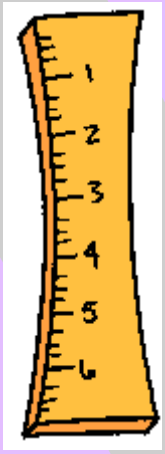
r = input as % of product value

To check, plug in t = .50/99.50

q = .25/99.00

r = 99.00/99.50

<u>Question</u>: Can you generalize the formula to the case of multiple inputs?



Effective Tariff

$$= \frac{t - \Sigma q_i r_i}{1 - \Sigma r_i}$$

t = ad valorem tariff on output

q_i = ad valorem tariff on input i

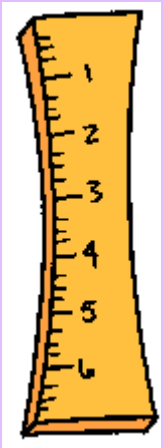
r_i = input i as % of product value

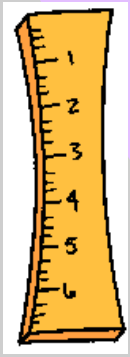
-

General Formula

Additional Concepts

- **Negative effective protection**
  - How would you get it?
  - What does it mean?
- **Tariff escalation**





Measurement Lessons

- **Tariffs protect activities, not products (pearl stringing, not strung pearls)**
- **Activities are stimulated by tariffs on outputs**
- **Activities are discouraged by tariffs on inputs**
- **Using import weights in average tariffs tends to compress measurement**
- **Note: Non-tariff barriers have risen in importance relative to tariffs, creating need for "tariffication"**

Dumping

Dumping

- Dumping defined
- A special case of price discrimination
- LTFV (less than fair value)
- Types of dumping
  - -Predatory
    - -Sporadic
      - -Persistent
- Law does not distinguish motivations for dumping

Dumping Complaint Procedures

- **Department of Commerce determines if import is being sold at LTFV.**
- **International Trade Commission determines if a domestic industry is being injured.**

ITC

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

Diamond Sawblades and Parts Thereof From China and Korea

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Not bedtime reading

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But ITC is potential info source

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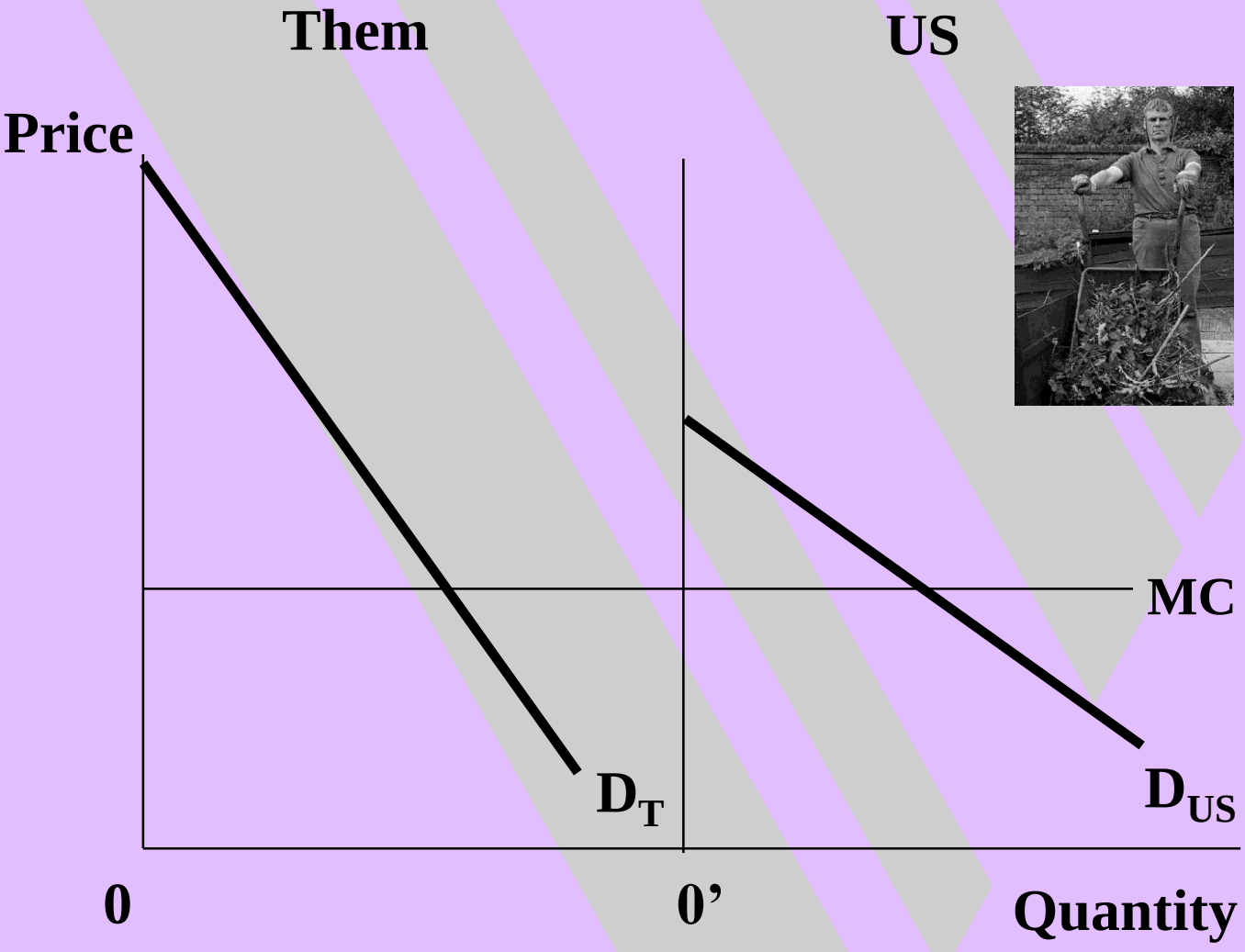
Persistent Dumping:

Example: Imperfect Competition

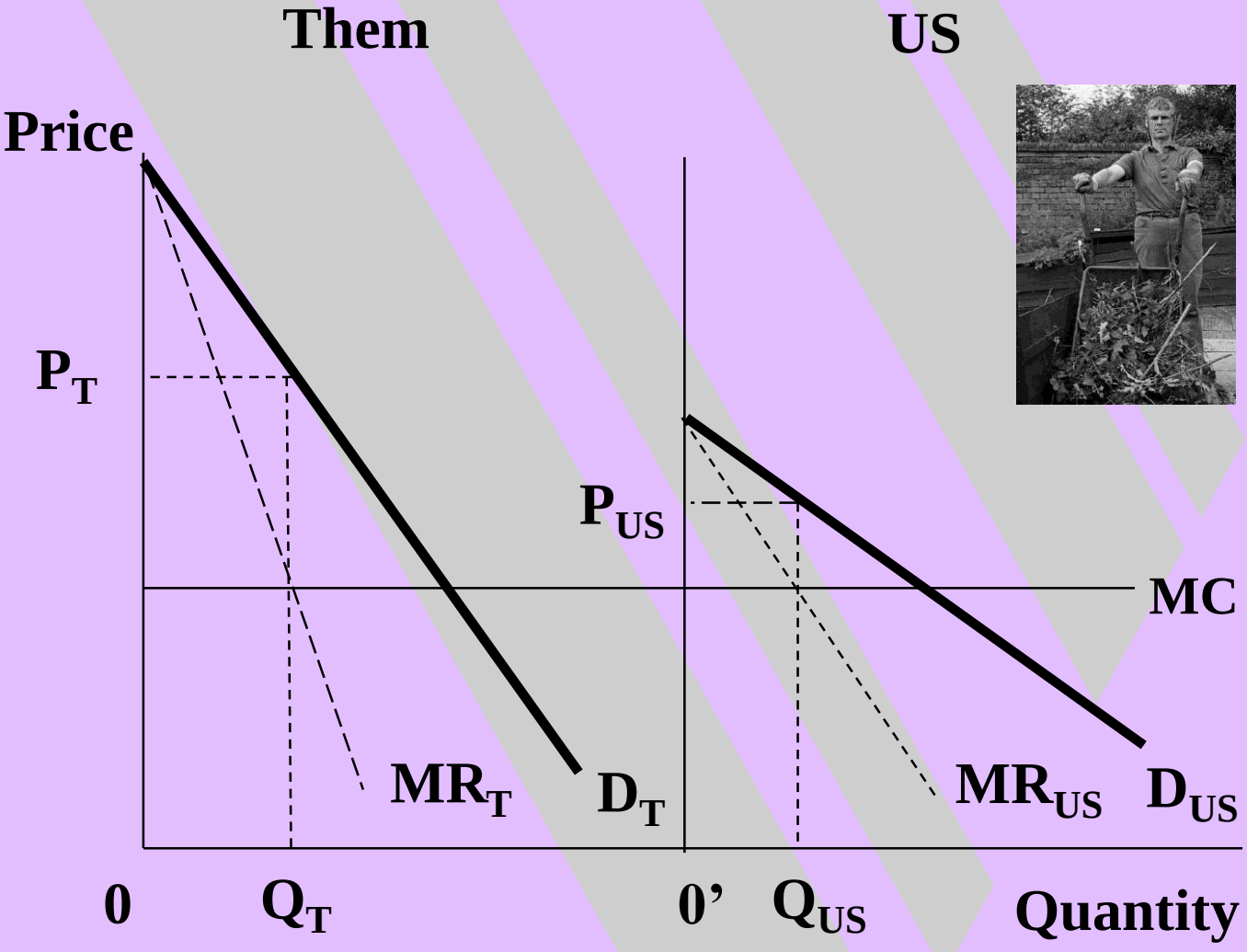


<u>Assumption</u>: They produce it there at constant marginal cost and sell it both there and here.

<u>Question</u>: At what price in each market?

Persistent Dumping:

Example: Imperfect Competition

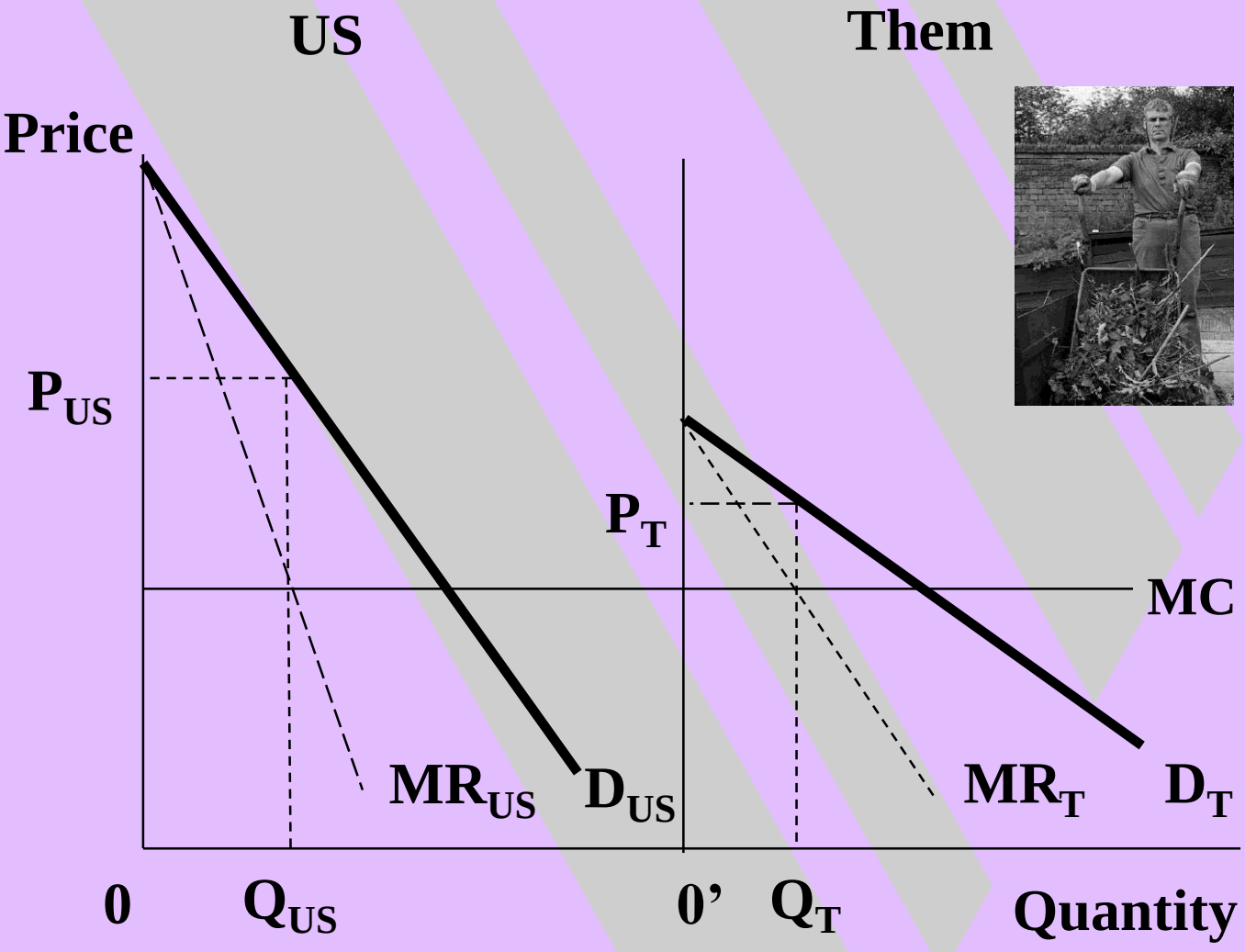


<u>Answer</u>: Set price where marginal revenue = marginal cost.

<u>Question</u>: Why might demand conditions differ between the two markets?

Persistent Dumping:

Reverse Example: Imperfect Competition



<u>Question 1</u>: Is this dumping?

<u>Question 2</u>: Under which situation are consumers in US better off?